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Form PTO-1449 (Substitute)  <b>U.S. DEPARTMENT OF COMMERCE</b> <b>PATENT AND TRADEMARK OFFICE</b>  <b>INFORMATION DISCLOSURE STATEMENT</b> <b>BY APPLICANT</b> (Use several sheets if necessary)	Attorney Docket Number <b>ARBS-1007US2 SRM/DBB</b>	Serial/Patent Number <b>09/815,828</b>
	Applicant/Patent Owner <b>Yevin, et al.</b>	
	Filing/Issue Date <b>3/23/01</b>	Group Art Unit <b>3743 3753</b>

**U.S. PATENTS**

Examiner Initial	Patent Number	Issue Date	Inventor	Class	Subclass	Filing Date
ARC	5,194,913	3/16/93	Myrick et al.	356	301	—
	5,376,556	12/27/94	Tarcha et al.	436	525	—
	5,400,136	3/21/95	Vo-Dinh	356	301	—
	5,404,218	4/4/95	Nave et al.	356	301	—
	5,468,644	11/21/95	Stephenson et al.	436	163	—
	5,498,875	3/12/96	Obremski et al.	250	458.1	—
	5,604,587	2/18/97	Che et al.	356	246	—
	5,615,673	4/1/97	Berger et al.	128	633	—
	5,621,522	4/15/97	Ewing et al.	356	301	—
	5,630,924	5/20/97	Fuchs et al.	204	601	—
	5,693,152	12/2/97	Carron	148	271	—
	5,836,317	11/17/98	Kunst	128	898	—
	5,866,430	2/2/99	Grow	436	172	—
	5,891,738	4/6/99	Soini et al.	436	501	—
	6,033,546	3/7/00	Ramsey	204	603	—
	6,040,906	3/21/00	Harhay	356	301	—
	6,044,285	3/28/00	Chaiken et al.	600	316	—
	6,064,897	5/16/00	Lindberg et al.	600	316	—
	6,087,182	7/11/00	Jeng et al.	436	66	—
	6,126,901	10/3/00	Patch et al.	422	64	—
	6,149,868	11/21/00	Natan et al.	422	82.05	—
	5,112,127	5/12/92	Carrabba et al.	356	301	—



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Sheet 2 of 5

### U.S. PATENTS

Examiner Initial	Patent Number	Issue Date	Inventor	Class	Subclass	Filing Date
ARC	6,141,095	10/31/00	Allen et al.	356	301	1/1
	6,181,957	1/30/01	Lambert et al.	600	319	1/1
	5,266,498	11/30/93	Tarcha et al.	436	525	1/1
	5,306,403	4/26/94	Vo-Dinh	204	182.8	1/1
	5,567,628	10/22/96	Tarcha et al.	436	525	1/1
	5,721,102	2/24/98	Vo-Dinh	435	6	1/1
	5,783,389	7/21/98	Vo-Dinh	435	6	1/1
	5,814,516	9/29/98	Vo-Dinh	435	287.2	1/1
	5,864,397	1/26/99	Vo-Dinh	356	301	1/1
	5,938,617	8/17/99	Vo-Dinh	600	476	1/1
	6,025,202	2/15/00	Natan	436	104	1/1

### U.S. PATENT PUBLICATIONS

Examiner Initial	Patent Application Publication Number	Publication Date	Applicant

### PENDING U.S. PATENT APPLICATIONS

Examiner Initial	Application Number	Filing Date	Inventor	Petition to Expunge? Yes   No

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FOREIGN PATENT DOCUMENTS								
Examiner Initial		Document Number	Publication Date	Country	Class	Subclass	Translation	
							Yes	No
ARC		EP 0 587 008	10.02.99	EPO	—	—		
		WO 01/06257	25.01.01	PCT	—	—		
		WO 98/50777	12.11.98	PCT	—	—		
		WO 99/44045	02.09.99	PCT	—	—		
		WO 99/44065	02/09/99	PCT	—	—		
		WO 01/15288	01.03.01	PCT	—	—		
		WO 99/67623	12/29/99	PCT	—	—		
V		SU 1064-115 A	12/30/83	Soviet Union	—	—	✓	
		JP 59-15792 A	1/26/84	Japan	—	—	✓	
OTHER DOCUMENTS (Include author (if any), title, publisher and place of publication, date and pertinent pages)								
ARC		Andres, R.P., et al., "Self-Assembly of a Two-Dimensional Superlattice of Molecularly Linked Metal Clusters," <i>Science</i> , Vol. 273, 20 September 1996, pp. 1690-1693.						
		Campion, A. and Kambhampati, P., Surface-Enhanced Raman Scattering," <i>Chemical Society Reviews</i> , 1998, Volume 27, pp. 241-250.						
		Chee, M., et al., "Accessing Genetic Information with High-Density DNA Arrays," <i>Science</i> , Vol. 274, 25 October 1996, pp. 610-614.						
		Danilova, Y.E., et al., "Absorption Spectra and Photomodification of Silver Fractal Clusters," <i>Fractal Reviews in the Natural and Applied Sciences</i> , Institute of Automation and Electrometry, Russian Academy of Science, Siberian Branch, pp. 101-112.						
		Elghanian, R., et al., "Selective Colorimetric Detection of Polynucleotides Based on the Distance-Dependent Optical Properties of Gold Nanoparticles," <i>Science</i> , Vol. 277, 22 August 1997, pp. 1078-1081.						
		Gadenne, P., et al., "Giant Stokes Fields on Semicontinuous Metal Films," <i>J. Opt. Soc. Am. B/Vol. 15</i> No. 1, January 1998, pp. 68-72.						
		Graham, D., et al., "Selective Detection of Deoxyribonucleic Acid at Ultralow Concentrations by SERRS," <i>Analytical Chemistry</i> , Vol. 69, No. 22, November 15, 1997, pp. 4703-4707.						
V		Hacia, J.G., et al., "Enhanced high density oligonucleotide array-based sequence analysis using molecular nucleoside triphosphates," <i>Nucleic Acids Research</i> , 1998, Vol. 26, No. 21, pp. 4975-4982.						

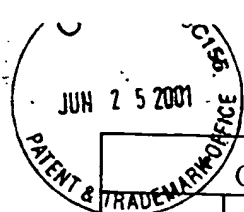


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## OTHER DOCUMENTS (Include author (if any), title, publisher and place of publication, date and pertinent pages)

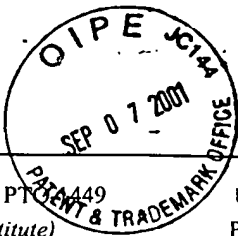
src	Igloi, G.L., "Variability in the Stability of DNA-Peptide Nucleic Acid (PNA) Single-Base Mismatched Duplexes: Real-Time Hybridization During Affinity Electrophoresis in PNA-Containing Gels," <i>Proc. Natl. Acad. Sci USA</i> , Vol. 95, July 1998 Biochemistry, pp. 8562-8567.
	Ingram, R.S., et al., "Poly-hetero-functionalized Alkanethiolate-Stabilized Gold Cluster Compounds," <i>J. Am. Chem. Soc.</i> , 1997, Volume 119, pp. 9175-9178.
	Jones, J.C., et al., "Quantitative Assessment of Surface-Enhanced Resonance Raman Scattering For the Analysis of Dyes on Colloidal Silver," <i>Analytical Chemistry</i> , Vol. 71, No. 3, February 1, 1999, pp. 596-601.
	Kim, W., et al., "Fractals in Microcavities: Giant Coupled, Multiplicative Enhancement of Optical Responses," <i>Physical Review Letters</i> , Volume 82, Number 24, 14 June 1999, pp. 4811-4814.
	Kneipp, K., et al., "Detection and Identification of a Single DNA Base Molecule Using Surface-Enhanced Raman Scattering (SERS)," <i>Physical Review E</i> , Volume 57, Number 6, June 1998, pp. R6281 - R6284.
	Kneipp, K., et al., "Single Molecule Detection Using Surface-Enhanced Raman Scattering (SERS)," <i>Physical Review Letters</i> , Volume 78, Number 9, 3 March 1997, pp. 1667-1670.
	Kurokawa, Y., et al., "Surface-Enhanced Raman Spectroscopic Detection of $\text{CO}_3^{2-}$ , $\text{SO}_3^{2-}$ , and Nucleic Acid Bases Using Polyvinyl Alcohol Film Doped with Ag Fine Particles," <i>Analytical Biochemistry</i> 209, 1993, pp. 247-250.
	Lisy, V., et al., "Internal DNA Modes Below $25\text{ cm}^{-1}$ : A Resonance Raman Spectroscopy Observation," <i>Journal of Biomolecular Structure &amp; Dynamics</i> , ISSN 0739-1102, Volume 14, Issue Number 4, 1997, pp. 517-523.
	Michael, K.L., et al., "Randomly Ordered Addressable High-Density Optical Sensor Arrays," <i>Analytical Chemistry</i> , Vol. 70, No. 7, April 1, 1998, pp. 1242-1248.
	Mucic, R.C., et al., "DNA-Directed Synthesis of Binary Nanoparticle Network Materials," <i>J. Am. Chem. Soc.</i> , 1998; Volume 120, pp. 12674-12675.
	Nie, S. et al., "Probing Single Molecules and Single Nanoparticles by Surface-Enhanced Raman Scattering," <i>Science</i> , Volume 275, 21 February 1997, pp. 1102-1106.
	Owen, J.F., et al., "Enhancement of Fluorescence Induced by Microstructure Resonances of a Dielectric Fiber," <i>Physical Review Letters</i> , Volume 47, Number 15, October 12, 1981, pp 1075-1078.
	Peterlinz, K.A., et al., "Observation of Hybridization and Dehybridization of Thiol-Tethered DNA Using Two-Color Surface Plasmon Resonance Spectroscopy," <i>J. Am. Chem. Soc.</i> , Vol. 119, No. 14, 1997, pp. 3401-3402.
	Plekhanov, A.I., et al., "Production and Spectroscopic Study of Silver Fractal Clusters by Laser Vaporization of Target," <i>Opt. Spectrosc. (USSR)</i> 71 (5), November 1991, pp. 451-454.
✓	Ratilainen, T., et al., "Hybridization of Peptide Nucleic Acid," <i>Biochemistry</i> 1998, 37, pp. 12331-12342.



#4

5 of 5

OTHER DOCUMENTS (Include author (if any), title, publisher and place of publication, date and pertinent pages)	
AKC	Safonov, V.P., et al., "Spectral Dependence of Selective Photomodification in Fractal Aggregates of Colloidal Particles," <i>Physical Review Letters</i> , Volume 80, Number 5, 2 February 1998, pp. 1102-1105.
	Weitz, D.A., et al., "Colloidal Aggregation Revisited: New Insights Based on Fractal Structure and Surface-Enhanced Raman Scattering," <i>Surface Science</i> , Volume 158, 1985, pp. 147-164.
	Xiao, T., et al., "Hunting for the Active Sites of Surface-Enhanced Raman Scattering: A New Strategy Based on Single Silver Particles," <i>Physical Review Letters</i> , Volume 78, Number 9, 3 March 1997, pp. 632-638.
	Zou, S., et al., "Surface-Enhanced Raman Scattering of Ultrathin Cadmium Chalcogenide Films on Gold Formed by Electrochemical Atomic-Layer Epitaxy: Thickness-Dependent Phonon Characteristics," <i>J. Phys. Chem. B</i> 1999, 103, pp. 2323 -2326.
✓	Carrabba et al., "The Prospect of Utilizing Surface Enhanced Raman Spectroscopy (SERS) for bio- and biomedical sensing," <i>SPIE Vol. 1201 Optical Fibers in Medicine V</i> (1990), pp. 438-446.
Examiner	<i>AKC</i>
Date Considered	<i>June 10, 2005</i>
*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	
*1 = Copy not submitted because it was submitted in prior application SN __/__, filed ____, 20__, relied on under 35 USC §120.	
*2 = Copy not submitted because it was submitted in prior application SN __/__, filed ____, 20__, relied on under 35 USC §120.	



Form PT 10449 (Substitute)		U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		Attorney Docket Number ARBS1007US2 SRM/DBB		Serial/Patent Number 09/815,828	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use several sheets if necessary)				Applicant/Patent Owner Yevin, et al.			
				Filing/Issue Date 3/23/01		Group Art Unit 3743 3753	
U.S. PATENTS							
Examiner Initial		Patent Number	Issue Date	First Named Inventor	Class	Subclass	Filing Date
RLC		5,814,565	9/29/98	Reichert et al.	422	82.11	
U.S. PATENT PUBLICATIONS							
Examiner Initial		Patent Application Publication Number	Publication Date	Applicant			
				RECEIVED SEP 12 2001 TECHNOLOGY CENTER R3710			
PENDING U.S. PATENT APPLICATIONS							
Examiner Initial		Application Number	Filing Date	First Named Inventor	Petition to Expunge? Yes   No		



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FOREIGN PATENT DOCUMENTS									
Examiner Initial		Document Number	Publication Date	Country	Class	Subclass	Trans- lation		
							Yes	No	

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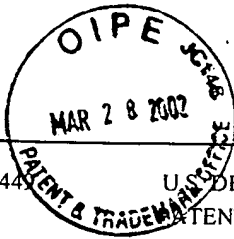
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Examiner <i>AVC</i>	Date Considered <i>June 10, 2005</i>
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Form PTO-1449 (Substitute)	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	Attorney Docket Number ARBS1007US2 SRM/DBB	Serial/Patent Number 09/815,828
		Applicant/Patent Owner Yevin, et al.	
		Filing/Issue Date 3/23/01	Group Art Unit <del>3743</del> 3753

INFORMATION DISCLOSURE STATEMENT  
BY APPLICANT  
(Use several sheets if necessary)

U.S. PATENTS

Examiner Initial	Patent Number	Issue Date	First Named Inventor	Class	Subclass	Filing Date
LVC	4,483,929	11/20/84	Szoka	436	533	—
	5,445,972	8/29/95	Tarcha et al.	436	544	—
	5,632,957	5/27/97	Heller et al.	422	68.1	—
	6,099,803	8/8/00	Ackley et al.	422	68.1	—
	6,071,394	6/6/00	Cheng et al.	204	547	—
	6,274,385	8/14/01	Hochlowski et al.	436	518	—
	5,506,678	4/9/96	Carlsen et al.	356	338	—
	5,839,290	11/24/98	Nazeri	62	119	—
	5,720,339	11/24/98	Glass et al.	165	104.26	—
	4,964,457	10/23/90	Leonard et al.	165	32	—

U.S. PATENT PUBLICATIONS

Examiner Initial	Patent Application Publication Number	Publication Date	Applicant

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U.S. PATENT PUBLICATIONS				
Examiner Initial		Patent Application Publication Number	Publication Date	Applicant

PENDING U.S. PATENT APPLICATIONS					
Examiner Initial		Application Number	Filing Date	First Named Inventor	Petition to Expunge? Yes   No

FOREIGN PATENT DOCUMENTS							
Examiner Initial		Document Number	Publication Date	Country	Class	Subclass	Translation Yes   No
ARC		WO 01/25758	4/12/01	PCT	—	—	
↓		WO 99/67641	12/29/99	PCT	—	—	

OTHER DOCUMENTS (Include author (if any), title, publisher and place of publication, date and pertinent pages)		
		Shalaev, V.M., "Nonlinear Optics of Random Media: Fractal Composites and Metal-Dielectric Films," <i>Springer Tracts in Modern Physics</i> , pp. 101-147.

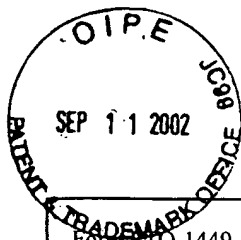
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Form PTO-1449 (Substitute)	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	Attorney Docket Number ARBS-1007US0 SRM/DBB	Serial/Patent Number 09/669,796
		Applicant/Patent Owner Yevin, et al.	
		Filing/Issue Date 9/26/00	Group Art Unit <del>1744</del> 3753

INFORMATION DISCLOSURE STATEMENT  
BY APPLICANT  
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U.S. PATENTS

Examiner Initial	Patent Number	Issue Date	Inventor	Class	Subclass	Filing Date
ARC	5,099,621	3/31/92	Schacklette	—	—	—

PENDING U.S. PATENT APPLICATIONS

Examiner Initial	Application Number	Filing Date	Inventor	Petition to Expunge? Yes   No

FOREIGN PATENT DOCUMENTS

Examiner Initial	Document Number	Publication Date	Country	Class	Subclass	Trans- lation Yes   No
ARC	SU 0905601 A	2/25/82	Russia	—	—	

OTHER DOCUMENTS (Include author (if any), title, publisher and place of publication, date and pertinent pages)


Examiner

M. V. V.

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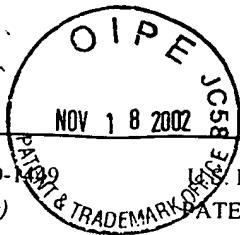
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Form PTO-100  
(Substitute)U.S. DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICEAttorney Docket Number  
ARBS-1007US0 SRM/DBBSerial/Patent Number  
09/815,828INFORMATION DISCLOSURE STATEMENT  
BY APPLICANT

(Use several sheets if necessary)

Applicant/Patent Owner  
Yevin, et al.Filing/Issue Date  
03/23/01Group Art Unit  
3743-3753

## U.S. PATENTS

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LVC	1.	5,255,067	10/19/93	Carrabba et al.	356	301	11/30/90
	2.	5,334,296	08/02/94	Henkens et al.	204	153.12	06/28/93
	3.	5,391,272	02/21/95	O'Daly et al.	204	153.12	03/08/94
	4.	5,527,712	06/18/96	Sheehy	436	525	05/30/95
	5.	5,837,552	11/17/98	Cotton et al.	436	525	06/07/95
✓	6.	6,040,191	03/21/00	Grow	436	172	10/22/98

## PENDING U.S. PATENT APPLICATIONS

Examiner Initial		Application Number	Filing Date	RECEIVED Inventor NOV 2 9 2002	Petition to Expunge? Yes   No
				GROUP 3600	

## FOREIGN PATENT DOCUMENTS

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## OTHER DOCUMENTS (Include author (if any), title, publisher and place of publication, date and pertinent pages)

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